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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,666	12/05/2003	Takao Uehara	S-2490/Cont	8476

7590 07/15/2004

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/727,666	Applicant(s) UEHARA ET AL.	
	Examiner Callie E. Shosho	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/925,451.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Barsotti et al. (U.S. 6,632,880).

Attention is drawn to col.15, lines 50-55 and example 8B of Barsotti et al. which discloses method wherein isocyanate functional non-aqueous dispersion, obtained in example 5, comprising copolymer obtained from approximately 13.4% (52.6/391.1) isocyanatoethyl methacrylate and 86.6% other monomer including methyl methacrylate and methyl acrylate is added to solvent borne paint.

In light of the above, it is clear that Barsotti et al. anticipate the present claims.

3. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 10158336 or Simms (U.S. 4,219,632).

JP 10158336, an English translation of which is included in this office action, discloses method wherein a copolymer obtained from 30-80% C₂-C₂₂ alkyl (meth)acrylate and 20-70% 2-isocyanatoethyl methacrylate is added to paint (claims 4 and 9, paragraphs 7-9 and 25).

Alternatively, Simms discloses method wherein a copolymer obtained from 25-75% C₂-C₂₂ alkyl (meth)acrylate and 25-75% 2-isocyanate ethyl methacrylate is added to solvent borne paint (col.1, lines 7-10 and 50-64, col.5, lines 13-24, and example 1).

In light of the above, it is clear that JP 10158336 or Simms anticipate the present claims.

4. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Cassatta et al. (U.S. 4,533,681).

Cassatta et al. disclose method wherein copolymer obtained from 0.5-20% isocyanatoethyl methacrylate, 0.5-20% hydroxyalkyl methacrylate, and 60-90% alkyl methacrylate is added to solvent borne paint (col.1, lines 25-27, col.2, lines 51-66, col.8, lines 57-63, col.9, lines 20, 25-26, and 54-65, and col.11, lines 20-21).

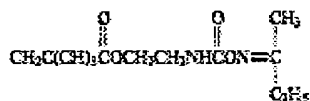
In light of the above, it is clear that Cassatta et al. anticipate the present claims.

5. Claims 1 and 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamura et al. (U.S. 5,576,406).

Yamamura et al. disclose method wherein copolymer obtained from monomers comprising alkyl (meth)acrylate and reactive monomer having a group derived from isocyanate group is added to solvent borne paint (col.1, lines 17-20, col.2, lines 1-5 and 32-36, col.3, lines 7-8 and 32, col.17, line 38, and col.26, lines 59-62). Attention is drawn to example 13 which

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discloses copolymer obtained from 57.5% (115/200) alkyl (meth)acrylate and 32.5% (65/200) monomer of the formula:



which is 2-(0-[1-methyl-propylideneamino]carboxyamino)ethyl methacrylate as presently claimed.

In light of the above, it is clear that Yamamura et al. anticipate the present claims.

6. **NOTE:** While all the cited prior art discloses method wherein copolymer obtained from reactive monomer having isocyanate group and other monomer which is reactable with the reactive monomer is added to solvent borne paint, it is noted that there is no explicit disclosure in any of the references that the copolymer prevents a whitening phenomenon for the solvent-borne paints. However, it is noted that, as set forth in MPEP 2112.02, the discovery of a new use of an old structure based on unknown properties only “might” be patentable as a process of using. This portion of the MPEP states that “when the claim recites using an old composition or structure and the “use” is directed to a result or properties of that composition or structure, then the claim is anticipated”, *In re May* 574 F.2d 1082, 1090, 197 USPQ 601, 607 (CCPA 1978) and *In re Tomlinson* 363 F.2d 928, 150 USPQ 623 (CCPA 1966).

In *May*, the courts held applicants had merely found a new property of the compound and that such a discovery does not constitute a new use.

This is directly applicable to the present situation wherein the present method claims only recite a property or result of the copolymer, i.e. preventing a whitening phenomenon for solvent-borne paints. As discussed above, the discovery that the claimed copolymer has a new property, i.e. preventing a whitening phenomenon for solvent-borne paints, does not constitute a new use.

In *Tomlinson*, the claims were directed to a process of inhibiting light degradation of polypropylene by mixing the polypropylene with a nickel compound. The prior art disclosed mixing the same nickel compound with polypropylene to lower heat degradation with no mention of light degradation. The courts upheld the rejections of record and stated that the claim language, i.e. "a process of inhibiting degradation of polypropylene caused by exposure to light", states the result of admixing the two materials and that "while the references do not show a specific recognition of that result, its discovery by appellants is tantamount only to finding a property in an old composition".

This appears to be the same situation in the present application. The cited prior art discloses adding the claimed copolymer to paint with no disclosure of preventing whitening phenomenon. However, the cited claim language states the result, i.e. preventing whitening phenomenon, of adding the claimed copolymer to the paint. While there is no specific recognition in any of the cited prior art of the claimed result, given that the cited prior art discloses the process as presently claimed, namely, adding the claimed copolymer in paint composition and given that the discovery of adding the claimed copolymer to paint prevents

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whitening phenomenon is tantamount only to finding a property in an old composition, the claims are properly anticipated.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barsotti et al. (U.S. 6,632,880), JP 10158336, Simms (U.S. 4,219,632), and Cassatta et al. (U.S. 4,533,681) any of which in view of Franchina (U.S. 6,479,605).

The disclosures with respect to Barsotti et al., JP 10158336, Simms, and Cassatta et al. in paragraphs 2-4 above are incorporated here by reference.

The difference between Barsotti et al., JP 10158336, Simms, and Cassatta et al. and the present claimed invention is the requirement in the claims that the copolymer is obtained from specific reactive monomer.

Franchina discloses the use of copolymer obtained from blocked isocyanate such as 2-(0-[1-methyl-propylideneamino]carboxyamino)ethyl methacrylate in order to promote durability (col.5, lines 38-50 and col.6, lines 1-12).

In light of the motivation for using specific monomer by Franchina, it therefore would have been obvious to one of ordinary skill in the art to use such monomer in the copolymer of either Barsotti et al., JP 10158336, Simms, or Cassatta et al. in order to impart durability, and thereby arrive at the claimed invention.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

EP 694564 discloses acrylate latex polymer, however, there is no disclosure that the polymer is obtained from reactive monomer having isocyanate group or an isocyanate derived group.

Turpin et al. (U.S. 4,608,314) disclose method wherein copolymer obtained from at least 5% m-isopropenyl- α - α -dimethylbenzyl isocyanate and 30-95% alkyl (meth)acrylate is added to water-based paint.

EP 610534 discloses method wherein copolymer obtained from 5-40% isocyanatoethyl methacrylate and 0-80% alkyl (meth)acrylate is added to water-based paint.

Brixius et al. (U.S. 4,446,175) disclose paint comprising copolymer obtained from isocyanatoethyl (meth)acrylate, alkyl acrylate, and mercaptan.

WO 93/03070 discloses copolymer obtained from monomer containing isocyanate group and monomer having no functional group capable of undergoing reaction with the isocyanate group wherein the copolymer is added to aqueous composition.

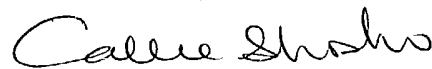
Simonet et al. (U.S. 5,015,711) disclose copolymer obtained from monomer with carboxyl functionality, monomer with no carboxyl functionality, and surfactant monomer, which is obtained by reacting isocyanatoethyl methacrylate and surfactant. There is no disclosure of the amounts of isocyanatoethyl methacrylate and surfactant utilized.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
7/2/04